

Claims

Sub A2 B2

1. ~~A system for the stimulation and production of a~~
hydrocarbon containing substance from a location below the surface of
the earth, where said location is in fluid communication, via a well casing,
with said surface, said system comprising the steps of

5 a.) positioning a transducer mechanism within said well casing
at said location, where said mechanism is capable of producing a narrow,
circular band of high energy impulses extending laterally from said well
casing into said location;

10 b.) maintaining said transducer mechanism at a pressure
essentially equal to the area in horizontal proximity to said mechanism;
and,

c.) energizing said transducer mechanism.

2. The system according to claim 1, wherein said high energy
impulses are horizontally focused within a circular band of between 2 and
3 ~~degrees.~~

3. The system according to claim 1, wherein said ~~transducer~~
mechanism comprises a plurality of axially aligned, circular transducer
elements.

Sub B3

4. ~~The system according to claim 3, wherein said transducer~~
elements are sealed within a pressure controlled housing.

5. The system according to claim 1, wherein said transducer
mechanism is energized at a frequency of at least 20 kHz.

004T20" FOOT 950

Sub
B3

~~6. The system according to claim 1, wherein said well casing includes a series of through holes at said location to facilitate movement of said hydrocarbon containing substance into said well casing.~~

7. The system according to claim 3, wherein each said transducer element is a piezoelectric substance.

8. The system according to claim 7, wherein said piezoelectric substance is a ceramic.

Sub
A3

~~9. The system according to claim 8, wherein said system is energized at a frequency on the order of 20kHz.~~

Add
A4

004720" T002T960